NOTE ON THE *CEPHALOCHORDA* IN THE AUSTRALIAN MUSEUM.

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(Figure 1.).

Seven specimens of *Amphioxus* obtained in the dredge by Messrs. C. Hedley and A. R. McCulloch, at a depth of 5 to 8 fathoms at Murray Island, represent two of the sections into which the genus *Branchiostoma* may be divided.

HETEROPLEURON (ASYMMETRON) LUCAYANUM, *Andrews.*

The discovery of this species, originally found in the West Indies, in such a distant locality as Torres Strait, would appear somewhat remarkable (though by no means without parallel) were it not that the species of *Asymmetron*, obtained by Willey, in the Louisiade Archipelago, and named by that author *A. caudatum*, is now looked upon by him as not distinct specifically from the original type form of the sub genus. As Murray Island is only about five or six hundred miles west of the Louisiades, there are many resemblances between the respective faunas, and it is not surprising to find a species of *Amphioxus* common to both.

HETEROPLEURON HEDLEYI, *sp. nov.*

The three specimens are of the same length—2·8 cm. In each of the two complete specimens there are fifty-four myotomes and nineteen gonads. In the third specimen several myotomes and gonads have been destroyed.

The opening of the oral hood is opposite the interval between the fifth and sixth segments; the atriopore opposite the thirty-third, the anus opposite the forty-fourth, and behind the anus there are either ten or eleven myotomes. The myotome formula is 33.11.10 or 11.

The rostral fin is slightly expanded, not separated off from the dorsal. The dorsal fin is moderately developed, not more than one-seventh of the whole vertical diameter. The caudal fin is distinctly lancet-shaped. The notochord is produced a little behind the last myotome. The ventral fin is without rays. The dorsal is without rays behind about the fortieth myotome. There are twenty-five to thirty oral cirri, united at their bases by a web. The velar tentacles are ten to twelve.

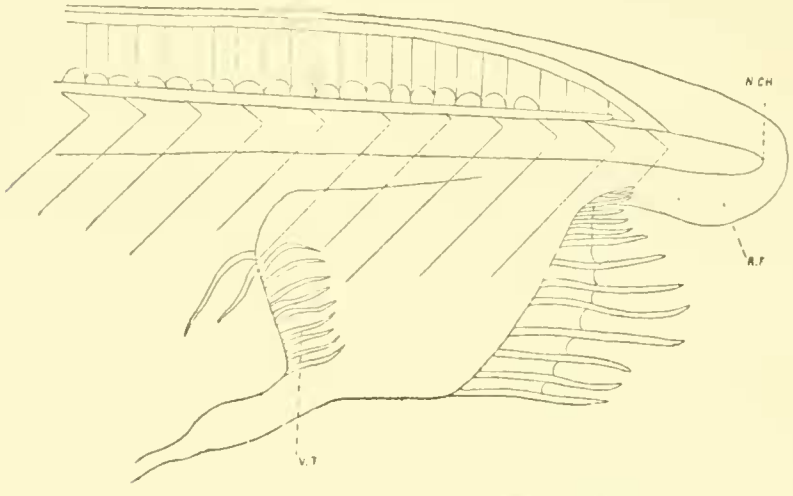

Fig. 1.—*Heteropleuron hedleyi*, Haswell.
N.CH., anterior end of notochord; R.F., rostral fin; V.T., velar tentacles.

When the Murray Island specimens of *Heteropleuron* are compared with Kirkaldy's description and figure of *H. cultellum*, and with my specimens of the latter species obtained in Torres Strait during the cruise of H.M.S. "Alert," a very marked difference is at once recognisable. Apart from the myotome formula and the number of gonads, the high dorsal fin quite definitely separates *H. cultellum* from all other species of *Amphioxus*. From *H. bassanum* the Murray Island form is also quite clearly separated by different and constant, though less striking, differences. *H. bassanum* has about seventy-five myotomes or more and twenty-six to thirty-one gonads; it has paired fin-rays in the ventral fin, and it has the rostral fin separated off from the dorsal by a marked "dip." *H. cingalense*, the only other described species of *Heteropleuron*, has sixty-one to sixty-four myotomes, with the formula 39 or 31 + 17 or 16 + 6 or 8. The ventral fin has paired fin-rays and there are twenty-five gonads.

Altogether six species of *Amphioxus* are now known to be in Australian seas. These are:—*Heteropleuron bassanum*, Gün-

ther, which is very abundant in Port Phillip; *H. cultellum*, Peters, and *H. belcheri*, Gray, the former known to occur in Torres Strait, and as far south on the Queensland coast as Moreton Bay, the latter known from Torres Strait (as well as from the coast of Borneo); *H. hectori*, Benham, from the east coast of the North Island of New Zealand; and *Asymmetron lucayanum*, Andrews, from Murray Island, Torres Strait, as well as the Louisiade Archipelago and the Bahamas; and *Heteropleuron hedleyi* from Murray Island.

An *Amphioxus* has been dredged in Port Jackson by Dr. E. P. Ramsay, but the specimens obtained were never critically examined, and have been lost. The only specimens from the coast of New South Wales in the Australian Museum collection are two from Port Stephens. These are hardly in a condition for certain identification, but have, in all ascertainable points, the features of *A. bassanum* The myotomes are about ninety in each of them, as against a maximum of only seventy-eight in Kirkaldy's description. But the same holds good of my specimens from Port Phillip, many of which have from eighty to ninety.

LITERATURE.

Günther, A.—Fishes, H.M.S. "Challenger."

Günther, A.—Fishes, H.M.S. "Alert," 1884.

Kirkaldy, J. W.—A Revision of the Genera and Species of the Branchiostomidæ. *Quart. Journ. Micro. Sci.*, xxxvii., 1895.

Willey, A.—On a new Amphioxus from the Louisiade Archipelago. *Quart. Journ. Micro. Sci.*, xxxix., 1896-7.

Benham, W. B.—*Heteropleuron hectori*, the New Zealand Lancelet. *Quart. Journ. Micro. Sci.*, xliv., 1901.

Herdman, W. A.—Cephalochorda. *Camb. Nat. Hist.*, vii.

Andrews, —.—An Undescribed Acraniate—*Asymmetron lucayanum*. *Stud. Johns Hopkins University*, v.